

REMARKS

This paper responds to the Office Action mailed on November 10, 2005.

Claims 1-13 and 18 are amended. Claims 113-134 are canceled without disclaimer or prejudice. Claims 135-154 are added. As a result, claims 1-20 and 135-154 remain pending in this application.

Information Disclosure Statement

Applicant submitted a Supplemental Information Disclosure Statement and a 1449 Form on April 27, 2005. Applicant respectfully requests that an initialed copy of the 1449 Form be returned to Applicant's Representatives to indicate that the cited references have been considered by the Examiner.

§112 Rejection of the Claims

Claims 1-20 were rejected under 35 U.S.C. § 112, second paragraph, for indefiniteness.

Applicant respectfully traverses. Applicant submits that claims 1-20, as amended, particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Accordingly, Applicant requests reconsideration and withdrawal of the rejection.

§102 Rejection of the Claims

Claims 1-20 were rejected under 35 U.S.C. § 102(b) for anticipation by Samant et al. (U.S. 6,313,896).

Applicant respectfully traverses for at least the reasons discussed below.

Independent claim 1 recites, among other things, a "semiconductor wafer" including at least one alignment mark. Applicant is unable to find in Samant a "semiconductor wafer" including at least one alignment mark. Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 1.

Regarding dependent claims 2-12, Applicant believes that each of the dependent claims 2-12 is not anticipated by Samant for the following reasons.

Dependent claim 2 depends from claim 1 and recites the things of claim 1. Thus, Applicant believes that claim 2 is not anticipated by Samant for at least the reasons discussed

above regarding claim 1. Further, Applicant is unable to find in Samant the things recited in claim 2 such as "the amorphous carbon layer has an absorption coefficient between about 0.15 and about 0.001 at wavelength of 633 nanometers". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 2.

Dependent claim 3 depends from claim 1 and recites the things of claim 1. Thus, Applicant believes that claim 3 is not anticipated by Samant for at least the reasons discussed above regarding claim 1. Further, Applicant is unable to find in Samant the things recited in claim 3 such as "the visible light range includes electromagnetic radiation having wavelengths between 400 nanometers and 700 nanometers". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 3.

Dependent claim 4 depends from claim 1 and recites the things of claim 1. Thus, Applicant believes that claim 4 is not anticipated by Samant for at least the reasons discussed above regarding claim 1. Further, Applicant is unable to find in Samant the things recited in claim 4 such as "the amorphous carbon layer has a thickness greater than 4000 Angstroms". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 4.

Dependent claim 5 depends from claim 4; claim 4 depends from claim 1. Thus, Applicant believes that claim 5 is not anticipated by Samant for at least the reasons discussed above regarding claims 1 and 4. Further, Applicant is unable to find in Samant the things recited in claim 5 such as "the device structure has a thickness greater than 40000 Angstroms". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 5.

Dependent claim 6 depends from claim 1 and recites the things of claim 1. Thus, Applicant believes that claim 6 is not anticipated by Samant for at least the reasons discussed above regarding claim 1. Further, Applicant is unable to find in Samant the things recited in claim 6 such as "the masking structure further includes a silicon oxynitride layer formed over the amorphous carbon layer". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 6.

Dependent claim 7 depends from claim 1 and recites the things of claim 1. Thus, Applicant believes that claim 7 is not anticipated by Samant for at least the reasons discussed

above regarding claim 1. Further, Applicant is unable to find in Samant the things recited in claim 7 such as "the masking structure further includes a photoresist layer". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 7.

Dependent claim 8 depends from claim 7; claim 7 depends from claim 1. Thus, Applicant believes that claim 8 is not anticipated by Samant for at least the reasons discussed above regarding claims 1 and 7. Further, Applicant is unable to find in Samant the things recited in claim 8 such as "the masking structure further includes an antireflective layer". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 8.

Dependent claim 9 depends from claim 7; claim 7 depends from claim 1. Thus, Applicant believes that claim 9 is not anticipated by Samant for at least the reasons discussed above regarding claims 1 and 7. Further, Applicant is unable to find in Samant the things recited in claim 9 such as "the photoresist layer includes at least one opening". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 9.

Dependent claim 10 depends from claim 9; claim 9 depends from claim 7; claim 7 depends from claim 1. Thus, Applicant believes that claim 10 is not anticipated by Samant for at least the reasons discussed above regarding claims 1, 7, and 9. Further, Applicant is unable to find in Samant the things recited in claim 10 such as "the amorphous carbon layer includes at least one opening continuous with the at least one opening of the photoresist layer". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 10.

Dependent claim 11 depends from claim 1 and recites the things of claim 1. Thus, Applicant believes that claim 11 is not anticipated by Samant for at least the reasons discussed above regarding claim 1. Further, Applicant is unable to find in Samant the things recited in claim 11 such as "the device structure includes a layer of a conducting material". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 11.

Dependent claim 12 depends from claim 11; claim 11 depends from claim 1. Thus, Applicant believes that claim 12 is not anticipated by Samant for at least the reasons discussed above regarding claims 1 and 11. Further, Applicant is unable to find in Samant the things recited in claim 12 such as "the device structure further includes an amorphous carbon layer, wherein the amorphous carbon layer of the device structure is transparent in visible light range".

Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 12.

Independent claim 13 recites, among other things, a "semiconductor wafer" including at least one alignment mark. Applicant is unable to find in Samant a "semiconductor wafer" including at least one alignment mark. Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 13.

Regarding dependent claims 14-20, Applicant believes that each of the dependent claims 14-20 is not anticipated by Samant for the following reasons.

Dependent claim 14 depends from claim 13 and recites the things of claim 13. Thus, Applicant believes that claim 14 is not anticipated by Samant for at least the reasons discussed above regarding claim 13. Further, Applicant is unable to find in Samant the things recited in claim 14 such as "the amorphous carbon layer has an absorption coefficient between about 0.15 and about 0.001 at wavelength of 633 nanometers". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 14.

Dependent claim 15 depends from claim 13 and recites the things of claim 13. Thus, Applicant believes that claim 15 is not anticipated by Samant for at least the reasons discussed above regarding claim 13. Further, Applicant is unable to find in Samant the things recited in claim 15 such as "the amorphous carbon layer has a thickness of at least 4000 Angstroms". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 15.

Dependent claim 16 depends from claim 13 and recites the things of claim 13. Thus, Applicant believes that claim 16 is not anticipated by Samant for at least the reasons discussed above regarding claim 13. Further, Applicant is unable to find in Samant the things recited in claim 16 such as "a photoresist layer". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 16.

Dependent claim 17 depends from claim 16; claim 16 depends from claim 13. Thus, Applicant believes that claim 17 is not anticipated by Samant for at least the reasons discussed above regarding claims 13 and 16. Further, Applicant is unable to find in Samant the things recited in claim 17 such as "a cap layer formed over the amorphous carbon layer". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 17.

Dependent claim 18 depends from claim 17; claim 17 depends from claim 16; claim 16 depends from claim 13. Thus, Applicant believes that claim 18 is not anticipated by Samant for at least the reasons discussed above regarding claims 13, 16, and 17. Further, Applicant is unable to find in Samant the things recited in claim 18 such as "the cap layer includes silicon oxynitride". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 18.

Dependent claim 19 depends from claim 16; claim 16 depends from claim 13. Thus, Applicant believes that claim 19 is not anticipated by Samant for at least the reasons discussed above regarding claims 13 and 16. Further, Applicant is unable to find in Samant the things recited in claim 19 such as "the photoresist layer includes at least one opening". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 19.

Dependent claim 20 depends from claim 19; claim 19 depends from claim 16; claim 16 depends from claim 13. Thus, Applicant believes that claim 20 is not anticipated by Samant for at least the reasons discussed above regarding claims 13, 16, and 19. Further, Applicant is unable to find in Samant the things recited in claim 20 such as "the amorphous carbon layer includes at least one opening continuous with the at least one opening of the photoresist layer". Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 20.

§103 Rejection of the Claims

Claims 1-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Samant et al. in view of You et al. (U.S. 6,864,556).

Applicant respectfully traverses for at least the reasons discussed below.

Independent claim 1 recites, among other things, a "semiconductor wafer" including at least one alignment mark. Applicant is unable to find in Samant and You, either individually or in the proposed combination, a teaching or fair suggestion of a "semiconductor wafer" including at least one alignment mark. Further, Applicant is unable to find a motivation to combine Samant and You to achieve the things claimed in claim 1. Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 1.

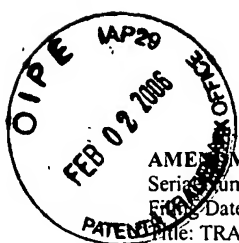
Regarding dependent claims 2-12, Applicant believes that dependent claims 2-12 are patentable over Samant and You, either individually or in the proposed combination, for at least the reasons discussed above regarding claim 13 and for the additional things recited in claims 2-12. Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claims 2-12.

Independent claim 13 recites, among other things, a "semiconductor wafer" including at least one alignment mark. Applicant is unable to find in Samant and You, either individually or in the proposed combination, a teaching or fair suggestion of a "semiconductor wafer" including at least one alignment mark. Further, Applicant is unable to find a motivation to combine Samant and You to achieve the things claimed in claim 13. Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claim 13.

Regarding dependent claims 14-20, Applicant believes that dependent claims 14-20 are patentable over Samant and You, either individually or in the proposed combination, for at least the reasons discussed above regarding claim 13 and for the additional things recited in claims 14-20. Accordingly, Applicant requests reconsideration and withdrawal of the rejection, and allowance of claims 14-20.

New Claims

Applicant submits that new claims 135-154 do not introduce new matter. Accordingly, Applicant requests consideration and allowance of new claims 135-154.



AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Serial Number: 10/661,379

Filing Date: September 12, 2003

Title: TRANSPARENT AMORPHOUS CARBON STRUCTURE IN SEMICONDUCTOR DEVICES

Page 13

Dkt: 303.864US1

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6969 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

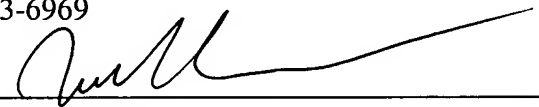
Respectfully submitted,

ZHIPING YIN ET AL.

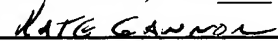
By their Representatives,


SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 373-6969

Date 31 January 2006

By 
Viet V. Tong
Reg. No. 45,416

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 31 day of January, 2006.


Name


Signature